

**ABSTRACT OF DISCLOSURE**

A host system is provided with one or more host-fabric adapters installed therein for connecting to a switched fabric of a data network. The host-fabric adapter may comprise a Micro-Engine (ME) arranged to establish connections and support data transfers via a switched fabric; a host interface arranged to receive and transmit host data transfer requests, in the form of descriptors, from the host system for data transfers, and incorporated therein a host interface Hardware Assist (HWA) mechanism configured to pre-process host descriptors for descriptor format errors in parallel with descriptor fetches so as to offload the Micro-Engine (ME) from exclusively checking for descriptor format errors; a serial interface arranged to receive and transmit data packets from the switched fabric for data transfers; and a first-in/first-out (FIFO) interface arranged to receive and transmit data packets to/from the switched fabric via the serial interface, and incorporated therein a Protection Index and Offset Hardware Assist (HWA) mechanism configured to process the Virtual Address (VA) and Memory Handle (MH) of data packets and generate therefrom a Protection Index (PI) and Offset so as to offload said Micro-Engine (ME) from exclusively processing data packets for data transfers.